

BRUHAT BENGALURU MAHANAGARA PALIKE							
Name of the work :- Construction of RCC culvert & U Shape drain for secondary SWD drains near Divya engineering works at Kammagondanahalli in Ward No.12							
Measurement recorded on 4/12/2018							
S.N	Description	Unit	No.	L	B	D	Qty
12	KSRRB M2100-10 - Plain Cement Concrete M10 with OPC cement @ 220 kgs, with crushed 40mm and down size graded metal coarse aggregates @0.84 Cum and fine aggregates @ 0.56Cum, in foundation mechanically mixed placed in foundation and compacted by vibration including curing for 14 days complete as per specifications MORTH Specification No.2100 all leads and lifts as directed by the Engineer in charge of the work.(SR2018-19 P222/27.18)						
	Sub drain	Cum					
			1	11.45	1.91	0.15	3.28
	Connecting Drain RHS		1	4.00	1.50	0.10	0.60
	Connecting Drain LHS		1	1.20	1.50	0.10	0.18
Total							4.06



G. Prasad, 4/12/18
Assistant Engineer,
SWD Dasarahalli Zone, BBMP.

H. S. Kumar
Assistant Executive Engineer,
SWD Dasarahalli Zone, BBMP.

Measurement recorded on 5/12/2018							
S.N	Description	Unit	No.	L	B	D	Qty
13	KSRRB M 2100-17.2 : Plain/reinforcement Cement Concrete design mix M25 with OPC cement @340 kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.70Cum and fine aggregates @0.47Cum with superplasticiser @ 3lts confirming to IS9103-1999 Reaffirmed-2008, open foundation complete as per Drawing and Technical Specification with Batching plant, transit mixer and concrete pump. MORTH Specification No. 1500, 1700 & 2100 all leads and lifts as directed by the Engineer in charge of the work.						
	Sub drain	Cum					
			1	11.45	1.91	0.30	6.56
	Connecting Drain RHS		1	4.00	1.50	0.30	1.80
	Connecting Drain LHS		1	1.20	1.50	0.30	0.54
Total							8.90



G. Prasad, 5/12/18
Assistant Engineer,
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Name of the work :- Construction of RCC culvert & U Shape drain for secondary SWD drains near Divya engineering works at Kammagondanahalli in Ward No.12

Measurement recorded on 6/12/2018

S.N	Description	Unit	No.	L	B	D	Qty
14	KSRRB M 2200-5.12 : Design mix M25 sub structure with OPC cement @340kgs, with 20mm and down size graded granite metal coarse aggregates @0.7Cum and fine aggregates @0.47Cum with superplastisiser @3lts confirming to IS9103-1999 Reaffirmed-2008 upto 5 mtrs. Upto 5 Mtrs height all leads and lifts as directed by the Engineer in charge of the work.(SR2018-19P227 /28.7.12)						
	Sub drain	Cum					
			2	11.45	0.25	1.20	6.87
	Connecting Drain RHS		2	4.00	0.25	1.20	2.40
	Connecting Drain LHS		2	1.20	0.45	2.00	2.16
	Total						11.43



Assistant Engineer,
Dasarahalli Zone, BBMP.

Assistant Executive Engineer,
SWD Dasarahalli Zone, BBMP.

Name of Work		Construction of RCC culvert & U Shape drain for secondary SWD drains near Divya engineering works at Dasarahalli Zone									
BOQ-18		Supplying, fitting and placing TMT bar reinforcement in sub-structure complete as per drawing and technical specifications complete as per specifications. TMT Bars Fe 500 all leads and lifts as directed by the Engineer in charge of the work.									
SL No.	DESCRIPTION	Shape of Bar	Dia of Bar (mm)	Spacing (M)	Nos	Cut Length in (M)	Total Length in (M)				
							10	12	16	20	32
	Sub Drain										
	U-shape										
	Length = 11.15										
	Raft Bottom Bar		12	0.20	1	59	1	1.60	-	94.40	-
	Raft Top Bar		12	0.125	1	92	1	1.60	-	147.20	-
	Dirtribution		10	0.20	2	10	1	11.15	223.00	-	-
	Inner Wall		12	0.15	2	75	1	1.70	-	255.00	-
	outer Wall		12	0.18	2	63	1	1.70	-	214.20	-
	Dirtribution		10	0.20	4	9	1	11.15	401.40	-	-
	Chairs		12		1	14	1	0.90	-	12.60	-
	U Bar		12		2	12	1	1.00	-	24.00	-
Total Length (Rmt)							624.40	747.40	-	-	-
Unit weight of bar							0.617	0.888	1.567	2.469	3.850
Total quantity in KG							385.250	663.690	-	-	-
Sub quantity							1.05 Tonne	1.04	-	-	-
U-Shape Grand quantity							51.65 Tonne	-	-	-	-

1048.74

Sub quantity 1.05 Tonne

1.04

U-Shape Grand quantity 51.65 Tonne



GR No. 10/12/18
Assistant Engineer
BBMP- SWD, Dasarahalli Zone
Bengaluru

Executive Engineer (SWD)
BBMP- SWD, Dasarahalli Zone
Bengaluru

[Signature]
Assistant Executive Engineer
BBMP- SWD, Dasarahalli Zone
Bengaluru

BRUHAT BENGALURU MAHANAGARA PALIKE

Name of the work :- Construction of RCC culvert & U Shape drain for secondary SWD drains near Divya engineering works at Kammagondanahalli in Ward No.12

Measurement recorded on 10/12/2018

S.N	Description	Unit	No.	L	B	D	Qty
20	PVC pipes 2.50 kg/sqm 110mm outer dia as directed by the Engineer in charge of the work.						
	Weep Holes	Rmt	4	96.80	0.300		116.16
							116.16

Total



10/12/18

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SWD Dasarahalli Zone, BBMP.

Assistant Executive Engineer,

SWD Dasarahalli Zone, BBMP.

10/12/18

BRUHAT BENGALURU MAHANAGARA PALIKE

Name of the work :- Construction of RCC culvert & U Shape drain for secondary SWD drains near Divya engineering works at Kammagondanahalli in Ward No.12

Measurement recorded on 18/12/2018

S/N	Description	Unit	No.	L	B	D	Qty
21	KSRRB M2200.9. Providing and laying of Filter media with granular materials/stone crushed aggregates satisfying the requirements laid down in clause 2500.4.2.2 of MORTH specifications to a thickness of not less than 600 mm with smaller size towards the soil and bigger size towards the wall and provided over the entire surface behind abutment, wing wall and return wall to the full height compacted to a firm condition complete as per drawing and Technical Specification complete as per specifications with all lead and lifts, etc., after breaking of clods complete as per specifications and as per direction of Engineer in-charge, page no 229/28, 13 all leads and lifts as directed by the Engineer in charge of the work.						
	LHS Side						
	1300.00 to 1301.80	Cum	1	1.80	0.50	1.80	1.62
	1301.80 to 1315.00		1	13.20	0.50	1.80	11.88
	1315.00 to 1330.00		1	15.00	0.50	1.80	13.50
	1330.00 to 1345.00		1	15.00	0.50	1.80	13.50
	1345.00 to 1360.00		1	15.00	0.50	1.80	13.50
	1360.00 to 1375.00		1	15.00	0.50	1.80	13.50
	1375.00 to 1390.00		1	15.00	0.50	1.80	13.50
	1390.00 to 1405.00		1	15.00	0.50	1.80	13.50
	1405.00 to 1420.00		1	15.00	0.50	1.80	13.50
	1420.00 to 1435.00		1	15.00	0.50	1.80	13.50
	RHS Side						
	1300.00 to 1301.80	Cum	1	1.80	0.50	1.80	1.62
	1301.80 to 1315.00		1	13.20	0.50	2.00	13.20
	1315.00 to 1330.00		1	15.00	0.50	2.00	15.00
	1330.00 to 1345.00		1	15.00	0.50	2.00	15.00
	1345.00 to 1360.00		1	15.00	0.50	2.00	15.00
	1360.00 to 1375.00		1	15.00	0.50	1.80	13.50
	1375.00 to 1390.00		1	15.00	0.50	1.80	13.50
	1390.00 to 1405.00		1	15.00	0.50	1.90	14.25
	1405.00 to 1420.00		1	15.00	0.50	1.85	13.88
	1420.00 to 1435.00		1	15.00	0.50	1.90	14.25
	1435.00 to 1446.50		1	11.50	0.50	1.90	10.93
	TOTAL						261.62



Assistant Engineer,
Dasarahalli Zone, BBMP.

Assistant Executive Engineer,
SWD Dasarahalli Zone, BBMP.

BRUHAT BENGALURU MAHANAGARA PALIKE	
Name of the work :- Construction of RCC culvert & U Shape drain for secondary SWD drains near Divya engineering works at Kammagondanahalli in Ward No.12	

Measurement recorded on 22/12/2018

A circular purple stamp of a Professional Engineer. The outer ring contains the text "REGISTERED PROFESSIONAL ENGINEER" at the top and "PE No. 12345" at the bottom. The center contains the text "PMC" and "New Bangalore SWD".


Assistant Executive Engineer,
SWD Dasarahalli Zone, BBMP.

BRUHAT BENGALURU MAHANAGARA PALIKE							
Name of the work :- Construction of RCC culvert & U Shape drain for secondary SWD drains near Divya engineering works at Kammagondanahalli in Ward No.12							
Measurement recorded on 26/12/2018							
S.N	Description	Unit	No.	L	B	D	Qty
23	KSRRB M100-1 Collecting, Conveying and disposal of surplus/excavated earth including Stone Boulder / Stone aggregates /Sand/ Kanker / Moorum to designated dumping site all leads and lifts for disposal as directed by the Engineer in charge of the work.						
	Cum						
							2323.86
							Qty As per vide item 3+4+6+7



G. Ravi / 26/12/18
Assistant Engineer,
Dasarahalli Zone, BBMP.

[Signature]
Assistant Executive Engineer,
SWD Dasarahalli Zone, BBMP.

P-2 - 455.55 - Sch-3
P-2 - 557.64 Sch 4
P-4 - 557.02 Sch 6
P-7 684.19 Sch 7
P-11 486.61 -11-
P-14 463.25 -11-
P-17 469.25 -11-
P-20 323.59 -11-
4057.1

Reduct.

P-4 - 557.02
P-5. 701.55

Total 2798.53 Restricted to 2323.86

BRUHAT BENGALURU MAHANAGARA PALIKE						
Name of the work :- Construction of RCC culvert & U Shape drain for secondary SWD drains near Divya engineering works at Kammagondanahalli in Ward No.12						
Measurement recorded on 16/11/2019						
S.N	Description	Unit	No.	L	B	D
25	Supplying and fixing MS. Rectangular poles made out of 2 equal angles of 65x65-6m m welded together and fixed in CC (1:2:4) WITH 2 NOS 16mm dia M.S. hold fast rods each of length 25 cms. Including cost of all materials cutting, bending scaffolding wherever necessary, nicely finishing the welded joints with all lead and lift and as per the directions of the Engineer-in-charge of the work and including providing 2 coats of approved quality paint over one coat of shop painting. (excluding cost of earth work and concrete)					
	Vertical Poles	Rmt	98			3.5
						343.00

Handwritten signature
Assistant Engineer,
SWD Dasarahalli Zone, BBMP.

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16/11/2019
Assistant Engineer,
SWD Dasarahalli Zone, BBMP.

Measurement recorded on 16/11/2019						
S.N	Description	Unit	No.	L	B	D
26	Providing and fixing MS block pipe of 38mm dia of heavy gauge of 14 including removing the bends, cutting the pipes and fixing pipe in between the two vertical poles (M.S rectangular poles) and spot welding the chain link with M.S block pipe including cost of all materials wastage in cutting and scaffolding wherever necessary with all lead and lift as directed by the engineer in charge of work etc, complete including two coats of approved quality paint over one coat of shop paint					
	RHS SIDE	Rmt	5	145.1		
	LHS SIDE		5	147.91		
	At Culvert		5	6.1		
						TOTAL
						725.5
						739.55
						30.50
						1495.60

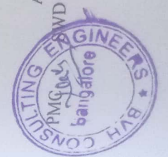
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Assistant Engineer,
SWD Dasarahalli Zone, BBMP.

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16/11/2019
Assistant Engineer,
SWD Dasarahalli Zone, BBMP.

Measurement recorded on 16/11/2019						
S.N	Description	Unit	No.	L	B	D
27	Providing chain link fencing 50 mm size of 8 gauge properly stretched between rectangular poles and fixed with suitable bolts & nuts, the free ends shall be welded to the pole and block pipe at top and bottom as required including cost of all materials, labour, lead and lifts and as per the directions of Engineer-in-charge of work including two coats of approved quality paint over one coat of shop paint.					
	RHS SIDE	Sqm	1	145.10		3.00
	LHS SIDE		1	147.91		3.00
	At Culvert		1	6.10		3.00
						TOTAL
						435.3
						443.73
						18.3
						897.33

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Assistant Engineer,
SWD Dasarahalli Zone, BBMP.

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16/11/2019
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Measurement recorded on 16/11/2019

S.N	Description	Unit	No.	L	B	D	Qty
29	WRD: Providing and fixing 20mm thick 300mm depth tarfelt expansion joint filler board for cement concrete lining of canal including cost of all materials, labour etc., Complete all leads and lifts as directed by the Engineer in charge of the work.						
	For U-Shape Drain	Rmt	12	14.20			170.40

16/11/2019
Assistant Engineer,
SWD Dasarahalli Zone, BBMP.

16/11/2019
Assistant Executive Engineer,
SWD Dasarahalli Zone, BBMP.



E-1 Supplying and fixing precast reinforced concrete slab 25cm thick including cost of reinforcement as per design and drawing material cost, transportation, hire charges of machinery, machine cutting the vertical face to get plain even surface etc., complete with all leads and lift conveyance charges, labour charges inclusive of cost of all materials.

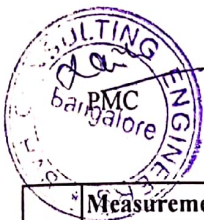
For U-Shape Drain	Sqm	1	12.70	1.50		19.05
		1	4.00	1.50	Total	6.00
						25.05

16/11/2019
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SWD Dasarahalli Zone, BBMP.

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Measurement Recorded On 4/11/2018							
S.N	Description	Unit	No.	L	B	D	Qty
1	KSRRB M200-12.3 Dismantling of Existing Structures like Culverts,Bridges,Retaining Walls and other structures comprising of masonry, cement concrete, wood work, steel work, including T&P material and stacking the seviceable material with all lifts complete as per specifications.(Prestressed/ reinforced cement concrete grade M20 and above) as directed by the Engineer in charge of the work.						
	For Culvert Slab	Cum	1	7.30	3.62	0.30	7.93
TOTAL							7.93



GRW/4/11/2018
Assistant Engineer,
SWD Dasarahalli Zone, BBMP.

[Signature]
Assistant Executive Engineer,
SWD Dasarahalli Zone, BBMP.

Measurement Recorded On 4/11/2018							
S.N	Description	Unit	No.	L	B	D	Qty
1	KSRRB M200-12.3 Dismantling of Existing Structures like Culverts,Bridges,Retaining Walls and other structures comprising of masonry, cement concrete, wood work, steel work, including T&P material and stacking the seviceable material with all lifts complete as per specifications.(Prestressed/ reinforced cement concrete grade M20 and above) as directed by the Engineer in charge of the work.						
	For Culvert Slab	Cum	1	7.50	3.36	0.30	7.56
TOTAL							7.56



GRW/4/11/2018
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Measurement Recorded On 4/11/2018

S.N	Description	Unit	No.	L	B	D	Qty
2	Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications, iii) Dismantling Stone Masonry. A. Rubble Stone masonry in lime mortar. MORTH Specification No. 202 KSRRB M200- 15.2. -do- B. Rubble stone masonry in cement mortar as directed by the Engineer in charge of the work.						
	For culvert SSM Wall	Cum	2	7.30	0.45	1.80	11.83
TOTAL							11.83



G. P. Kumar / 4/11/2018
Assistant Engineer,
SWD Dasarahalli Zone, BBMP.

H. S. Kumar
Assistant Executive Engineer,
SWD Dasarahalli Zone, BBMP.

Measurement Recorded On 5/11/2018

S.N	Description	Unit	No.	L	B	D	Qty
2	Dismantling of existing structures like culverts, bridges, retaining walls and other structure comprising of masonry, cement concrete, wood work, steel work, including T&P and scaffolding wherever necessary, sorting the dismantled material, disposal of unserviceable material and stacking the serviceable material with all lifts complete as per specifications, iii) Dismantling Stone Masonry. A. Rubble Stone masonry in lime mortar. MORTH Specification No. 202 KSRRB M200- 15.2. -do- B. Rubble stone masonry in cement mortar as directed by the Engineer in charge of the work.						
	For culvert SSM Wall	Cum	2	7.50	0.45	1.80	12.15
TOTAL							12.15



G. P. Kumar / 5/11/2018
Assistant Engineer,
SWD Dasarahalli Zone, BBMP.

H. S. Kumar
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